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CSC 174 - Advanced Database Management Systems

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Assignment 3

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Create Table Statements

Student Table

```
matthewmendoza2@ecs-...  
mysql> CREATE TABLE Student  
-> (SSN CHAR(9),  
-> StudentName VARCHAR(30),  
-> Address VARCHAR(30),  
-> Email VARCHAR(30),  
-> PRIMARY KEY (SSN));  
Query OK, 0 rows affected (0.04 sec)  
mysql>
```

TA Table

```
matthewmendoza2@ecs-pd-proj-db:~  
mysql> CREATE TABLE TA  
-> (SSN CHAR(9),  
-> Salary INTEGER,  
-> FOREIGN KEY (SSN) REFERENCES Student(SSN));  
Query OK, 0 rows affected (0.02 sec)  
mysql>
```

Course Table

```
matthewmendoza2@ecs-pd-proj-db:~  
mysql> CREATE TABLE Course  
-> (CourseNo VARCHAR(7),  
-> CourseName VARCHAR(20),  
-> NoOfStudents INTEGER,  
-> InstructorID VARCHAR(10),  
-> TASSN CHAR(9),  
-> PRIMARY KEY (CourseNo),  
-> FOREIGN KEY (TASSN) REFERENCES TA(SSN));  
Query OK, 0 rows affected (0.02 sec)  
mysql>
```

Enrolled Table

```
matthewmendoza2@ecs-pd-proj-db:~  
mysql> CREATE TABLE Enrolled  
-> (SSN CHAR(9),  
-> CourseNo VARCHAR(7),  
-> GRADE CHAR(1),  
-> PRIMARY KEY (SSN, CourseNo),  
-> FOREIGN KEY (CourseNo) REFERENCES Course(CourseNo));  
Query OK, 0 rows affected (0.04 sec)  
mysql>
```

Instructor Table

```
matthewmendoza2@ecs...  
mysql> CREATE TABLE Instructor  
-> (Title VARCHAR(20),  
-> InstructorID VARCHAR(10),  
-> InstructorName VARCHAR(20),  
-> PRIMARY KEY (InstructorID));  
Query OK, 0 rows affected (0.02 sec)  
mysql>
```

Classroom Table

```
matthewmendoza2@ecs-pd-p...  
mysql> CREATE TABLE Classroom  
-> (RoomNo INTEGER,  
-> Building VARCHAR(10),  
-> Capacity INTEGER,  
-> PRIMARY KEY (RoomNo, Building));  
Query OK, 0 rows affected (0.02 sec)  
mysql>
```

OnlineCourse Table

```
matthewmendoza2@ecs-pd-proj-db:~  
mysql> CREATE TABLE OnlineCourse  
-> (CourseNo VARCHAR(7),  
-> URL VARCHAR(50),  
-> FOREIGN KEY (CourseNo) REFERENCES Course(CourseNo));  
Query OK, 0 rows affected (0.02 sec)  
mysql>
```

InPersonCourse Table

```
matthewmendoza2@ecs-pd-proj-db:~  
mysql> CREATE TABLE InPersonCourse  
-> (CourseNo VARCHAR(7) REFERENCES Course(CourseNo),  
-> RoomNo INTEGER,  
-> Building VARCHAR(10),  
-> ClassTime VARCHAR(7) NOT NULL,  
-> FOREIGN KEY (RoomNo, Building) REFERENCES Classroom(RoomNo, Building));  
Query OK, 0 rows affected (0.03 sec)  
mysql>
```

Populate Database - Insert Statements

Create Data Entries for Table Students

```
matthewmendoza2@ecs-pd-proj-db:~  
mysql>  
mysql> INSERT INTO Student  
-> (SSN, StudentName, Address, Email)  
-> VALUES  
-> (862494318, 'Haruhi Fujioka', '7098 Prince Ave', 'haruhi_fujioka@hostclub.com');  
Query OK, 1 row affected (0.01 sec)  
mysql> 
```

```
matthewmendoza2@ecs-pd-proj-db:~  
mysql> INSERT INTO Student  
-> (SSN, StudentName, Address, Email)  
-> VALUES  
-> (539991337, 'Tamaki Suoh', '743 Arlington Lane', 'tamaki_suoh@hostclub.com');  
Query OK, 1 row affected (0.01 sec)  
mysql> 
```

```
matthewmendoza2@ecs-pd-proj-db:~  
mysql> INSERT INTO Student  
-> (SSN, StudentName, Address, Email)  
-> VALUES  
-> (567556659, 'Kyoya Ootori', '756 Pennington Road', 'kyoya_ootori@hostclub.com');  
Query OK, 1 row affected (0.00 sec)  
mysql> 
```

```
matthewmendoza2@ecs-pd-proj-db:~  
mysql> INSERT INTO Student  
-> (SSN, StudentName, Address, Email)  
-> VALUES  
-> (158901162, 'Mitsukuni Haninozuka', '142 Old Vernon St', 'mitsukuni_nozuka@hostclub.com');  
Query OK, 1 row affected (0.00 sec)  
mysql> 
```

```
matthewmendoza2@ecs-pd-proj-db:~  
mysql> INSERT INTO Student  
-> (SSN, StudentName, Address, Email)  
-> VALUES  
-> (540915327, 'Takashi Morinozuka', '9245 Pineknoll Ave', 'takashi_nozuka@hostclub.com');  
Query OK, 1 row affected (0.00 sec)  
mysql> 
```

Create Data Entries for Table TAs

```
matthewmendoza2@ecs...  
mysql> INSERT INTO TA  
-> (SSN, Salary)  
-> VALUES  
-> (567556659, 10000);  
Query OK, 1 row affected (0.00 sec)  
mysql>
```

```
matthewmendoza2@ecs...  
mysql> INSERT INTO TA  
-> (SSN, Salary)  
-> VALUES  
-> (158901162, 20000);  
Query OK, 1 row affected (0.00 sec)  
mysql>
```

```
matthewmendoza2@ecs...  
mysql> INSERT INTO TA  
-> (SSN, Salary)  
-> VALUES  
-> (540915327, 30000);  
Query OK, 1 row affected (0.01 sec)  
mysql>
```

Create Data Entries for Table Courses

```
matthewmendoza2@ecs-pd-proj-db:~  
mysql> INSERT INTO Course  
-> (CourseNo, CourseName, NoOfStudents, InstructorID, TASSN)  
-> VALUES  
-> (12345, 'ADV DB MGT Systems', 90, 111111111, 567556659);  
Query OK, 1 row affected (0.00 sec)  
mysql>
```

```
matthewmendoza2@ecs-pd-proj-db:~  
mysql> INSERT INTO Course  
-> (CourseNo, CourseName, NoOfStudents, InstructorID, TASSN)  
-> VALUES  
-> (23456, 'Data WHS & Mining', 3, 222222222, 567556659);  
Query OK, 1 row affected (0.00 sec)
```

```
matthewmendoza2@ecs-pd-proj-db:~  
mysql> INSERT INTO Course  
-> (CourseNo, CourseName, NoOfStudents, InstructorID, TASSN)  
-> VALUES  
-> (34567, 'INTRO to PROB Theory', 33, 333333333, 158901162);  
Query OK, 1 row affected (0.00 sec)  
  
mysql> █
```

```
matthewmendoza2@ecs-pd-proj-db:~  
mysql> INSERT INTO Course  
-> (CourseNo, CourseName, NoOfStudents, InstructorID, TASSN)  
-> VALUES  
-> (45678, 'Computer Forensics', 23, 444444444, 158901162);  
Query OK, 1 row affected (0.00 sec)  
  
mysql> █
```

```
matthewmendoza2@ecs-pd-proj-db:~  
mysql> INSERT INTO Course  
-> (CourseNo, CourseName, NoOfStudents, InstructorID, TASSN)  
-> VALUES  
-> (67890, 'DB MGMT Systems', 63, 111111111, 540915327);  
Query OK, 1 row affected (0.00 sec)  
  
mysql> █
```

```
matthewmendoza2@ecs-pd-proj-db:~  
mysql> INSERT INTO Course  
-> (CourseNo, CourseName, NoOfStudents, InstructorID, TASSN)  
-> VALUES  
-> (78901, 'INTRO MATH STATS', 39, 333333333, 540915327);  
Query OK, 1 row affected (0.00 sec)  
  
mysql> █
```

Create Data Entries for Table Enrolled

```
matthewmendoza2@ecs...  
mysql> INSERT INTO Enrolled  
-> (SSN, CourseNo, GRADE)  
-> VALUES  
-> (290937023, 12345, 'A');  
Query OK, 1 row affected (0.00 sec)  
  
mysql> █
```

```
matthewmendoza2@e...  
mysql> INSERT INTO Enrolled  
-> (SSN, CourseNo, GRADE)  
-> VALUES  
-> (782438106, 23456, 'F');  
Query OK, 1 row affected (0.01 sec)  
mysql>
```

```
matthewmendoza2@e...  
mysql> INSERT INTO Enrolled  
-> (SSN, CourseNo, GRADE)  
-> VALUES  
-> (996958247, 34567, 'C');  
Query OK, 1 row affected (0.01 sec)  
mysql>
```

```
matthewmendoza2@e...  
mysql> INSERT INTO Enrolled  
-> (SSN, CourseNo, GRADE)  
-> VALUES  
-> (156836151, 45678, 'D');  
Query OK, 1 row affected (0.00 sec)  
mysql>
```

```
matthewmendoza2@e...  
mysql> INSERT INTO Enrolled  
-> (SSN, CourseNo, GRADE)  
-> VALUES  
-> (776792013, 67890, 'A');  
Query OK, 1 row affected (0.01 sec)  
mysql>
```

Create Data Entries for Table Instructors

```
matthewmendoza2@ecs-pd-proj-db:~  
mysql> INSERT INTO Instructor  
-> (Title, InstructorID, InstructorName)  
-> VALUES  
-> ('Professor', 111111111, 'Ying Jin');  
VALUES  
('Professor', 22222222, 'Anna Baynes');  
  
INSERT INTO Instructor  
(Title, InstructorID, InstructorName)  
VALUES  
('Professor', 33333333, 'Xiaoyan Sun');  
  
INSERT INTO Instructor  
(Title, InstructorID, InstructorName)  
VALUES  
('Professor', 55555555, 'Haiquan Chen');  
  
INSERT INTO Instructor  
(Title, InstructorID, InstructorName)  
VALUES  
('Professor', 66666666, 'Herbert Mayer');  
Query OK, 1 row affected (0.01 sec)  
  
mysql>  
mysql> INSERT INTO Instructor  
-> (Title, InstructorID, InstructorName)  
-> VALUES  
-> ('Professor', 22222222, 'Anna Baynes');  
Query OK, 1 row affected (0.00 sec)  
  
mysql>  
mysql> INSERT INTO Instructor  
-> (Title, InstructorID, InstructorName)  
-> VALUES  
-> ('Professor', 33333333, 'Xiaoyan Sun');  
Query OK, 1 row affected (0.00 sec)  
  
mysql>  
mysql> INSERT INTO Instructor  
-> (Title, InstructorID, InstructorName)  
-> VALUES  
-> ('Professor', 55555555, 'Haiquan Chen');  
Query OK, 1 row affected (0.01 sec)  
  
mysql>  
mysql> INSERT INTO Instructor  
-> (Title, InstructorID, InstructorName)  
-> VALUES  
-> ('Professor', 66666666, 'Herbert Mayer');  
Query OK, 1 row affected (0.00 sec)  
  
mysql> 
```


Create Data Entries for Table Classrooms

```
matthewmendoza2@ecs...  
mysql> INSERT INTO Classroom  
-> (RoomNo, Building, Capacity)  
-> VALUES  
-> (202, 'SQU', 30);  
Query OK, 1 row affected (0.01 sec)  
  
mysql>  
mysql> INSERT INTO Classroom  
-> (RoomNo, Building, Capacity)  
-> VALUES  
-> (101, 'RVR', 30);  
Query OK, 1 row affected (0.01 sec)  
  
mysql> █
```

Create Data Entries for Table OnlineCourses

```
matthewmendoza2@ecs-pd-proj-db:~  
mysql> INSERT INTO OnlineCourse  
-> (CourseNo, URL)  
-> VALUES  
-> (12345, 'https://csus.zoom.us/j/97924806971');  
  
INSERT INTO OnlineCourse  
(CourseNo, URL)  
VALUES  
(23456, 'https://csus.zoom.us/j/7043055709');  
  
INSERT INTO OnlineCourse  
(CourseNo, URL)  
VALUES  
(45678, 'https://csus.zoom.us/j/99963148416');Query OK, 1 row affected (0.00 sec)  
  
mysql>  
mysql> INSERT INTO OnlineCourse  
-> (CourseNo, URL)  
-> VALUES  
-> (23456, 'https://csus.zoom.us/j/7043055709');  
Query OK, 1 row affected (0.00 sec)  
  
mysql>  
mysql> INSERT INTO OnlineCourse  
-> (CourseNo, URL)  
-> VALUES  
-> (45678, 'https://csus.zoom.us/j/99963148416');  
Query OK, 1 row affected (0.00 sec)  
  
mysql> █
```

Create Data Entries for Table InPersonCourses

```
matthewmendoza2@ecs-pd-proj-db:~  
mysql>  
mysql> INSERT INTO InPersonCourse  
-> (CourseNo, RoomNo, Building, ClassTime)  
-> VALUES  
-> (34567, 202, 'SQU', '9:00 am');  
Query OK, 1 row affected (0.00 sec)  
  
mysql>  
mysql> INSERT INTO InPersonCourse  
-> (CourseNo, RoomNo, Building, ClassTime)  
-> VALUES  
-> (56789, 202, 'SQU', '12:00 pm');  
ERROR 1406 (22001): Data too long for column 'ClassTime' at row 1  
mysql>  
mysql> INSERT INTO InPersonCourse  
-> (CourseNo, RoomNo, Building, ClassTime)  
-> VALUES  
-> (67890, 101, 'RVR', '1:30 am');  
Query OK, 1 row affected (0.00 sec)  
  
mysql>  
mysql> INSERT INTO InPersonCourse  
-> (CourseNo, RoomNo, Building, ClassTime)  
-> VALUES  
-> (78901, 101, 'RVR', '2:00 pm');  
Query OK, 1 row affected (0.01 sec)  
  
mysql> █
```

CREATE VIEWS

TAView

```
matthewmendoza2@ecs-pd-proj-db:~  
mysql> /* Create view for TAs */  
mysql>  
mysql> CREATE VIEW TAView As  
-> Select S.SSN, S.StudentName, S.Address, S.Email, T.Salary  
-> From Student as S, TA as T  
-> Where S.SSN=T.SSN;  
Query OK, 0 rows affected (0.00 sec)  
  
mysql>  
mysql> /* "Print" items in TAView */  
mysql>  
mysql> SELECT * FROM TAView;  
+-----+-----+-----+-----+-----+  
| SSN      | StudentName      | Address              | Email              | Salary |  
+-----+-----+-----+-----+-----+  
| 567556659 | Kyoya Ootori      | 756 Pennington Road | kyoya_ootori@hostclub.com | 10000 |  
| 158901162 | Mitsukuni Haninozuka | 142 Old Vernon St  | mitsukuni_nozuka@hostclub.com | 20000 |  
| 540915327 | Takashi Morinozuka | 9245 Pineknoll Ave  | takashi_nozuka@hostclub.com | 30000 |  
+-----+-----+-----+-----+-----+  
3 rows in set (0.00 sec)  
  
mysql> █
```

OnlineView

```
matthewmendoza2@ecs-pd-proj-db:~  
mysql> /* Create view for OnlineCourses */  
mysql>  
mysql> CREATE VIEW OnlineCourseView As  
-> Select C.CourseNo, C.CourseName, C.InstructorID, C.NoOfStudents, C.TASSN, W.URL  
-> From Course as C, OnlineCourse as W  
-> Where C.CourseNo = W.CourseNo;  
Query OK, 0 rows affected (0.00 sec)  
  
mysql>  
mysql> /* "Print" items in OnlineCourseView */  
mysql>  
mysql> SELECT * FROM OnlineCourseView;  
+-----+-----+-----+-----+-----+-----+  
| CourseNo | CourseName      | InstructorID | NoOfStudents | TASSN | URL |  
+-----+-----+-----+-----+-----+-----+  
| 12345    | ADV DB MGT Systems | 111111111 | 90 | 567556659 | https://csus.zoom.us/j/97924806971 |  
| 23456    | Data WHS & Mining | 222222222 | 3 | 567556659 | https://csus.zoom.us/j/7043055709 |  
| 45678    | Computer Forensics | 444444444 | 23 | 158901162 | https://csus.zoom.us/j/99963148416 |  
+-----+-----+-----+-----+-----+-----+  
3 rows in set (0.00 sec)  
  
mysql> █
```

InPersonCourseView

```
matthewmendoza2@ecs-pd-proj-db:~
mysql> /* Create view for InPersonCourses */
mysql>
mysql> CREATE VIEW InPersonCourseView As
-> Select C.CourseNo, C.CourseName, C.InstructorID, C.NoOfStudents, C.TASSN, T.ClassTime, T.RoomNo, T.Building
-> From Course as C, InPersonCourse as T
-> Where C.CourseNo = T.CourseNo;
Query OK, 0 rows affected (0.01 sec)

mysql>
mysql> /* "Print" items in InPersonCourseView */
mysql>
mysql> SELECT * FROM InPersonCourseView;
+-----+-----+-----+-----+-----+-----+-----+-----+
| CourseNo | CourseName | InstructorID | NoOfStudents | TASSN | ClassTime | RoomNo | Building |
+-----+-----+-----+-----+-----+-----+-----+-----+
| 34567 | INTRO to PROB Theory | 333333333 | 33 | 158901162 | 9:00 am | 202 | SQU |
| 67890 | DB MGMT Systems | 111111111 | 63 | 540915327 | 1:30 am | 101 | RVR |
| 78901 | INTRO MATH STATS | 333333333 | 39 | 540915327 | 2:00 pm | 101 | RVR |
+-----+-----+-----+-----+-----+-----+-----+-----+
3 rows in set (0.00 sec)

mysql> 
```

Drop View and Table

```
matthewmendoza2@ecs-...
mysql> SHOW TABLES;
+-----+-----+
| Tables_in_CSC174038 |
+-----+-----+
| Classroom |
| Course |
| Enrolled |
| InPersonCourse |
| InPersonCourseView |
| Instructor |
| OnlineCourse |
| OnlineCourseView |
| Student |
| TA |
| TAView |
+-----+-----+
11 rows in set (0.00 sec)

mysql> DROP VIEW TAView;
Query OK, 0 rows affected (0.00 sec)

mysql> DROP VIEW OnlineCourseView;
Query OK, 0 rows affected (0.00 sec)

mysql> DROP VIEW InPersonCourseView;
Query OK, 0 rows affected (0.00 sec)

mysql> DROP TABLE Enrolled;
Query OK, 0 rows affected (0.00 sec)

mysql> DROP TABLE Instructor;
Query OK, 0 rows affected (0.01 sec)

mysql> DROP TABLE OnlineCourse;
Query OK, 0 rows affected (0.01 sec)

mysql> DROP TABLE InPersonCourse;
Query OK, 0 rows affected (0.01 sec)

mysql> DROP TABLE Course;
Query OK, 0 rows affected (0.01 sec)

mysql> DROP TABLE TA;
Query OK, 0 rows affected (0.01 sec)

mysql> DROP TABLE Student;
Query OK, 0 rows affected (0.01 sec)

mysql> DROP TABLE Classroom;
Query OK, 0 rows affected (0.00 sec)

mysql> SHOW TABLES;
Empty set (0.00 sec)

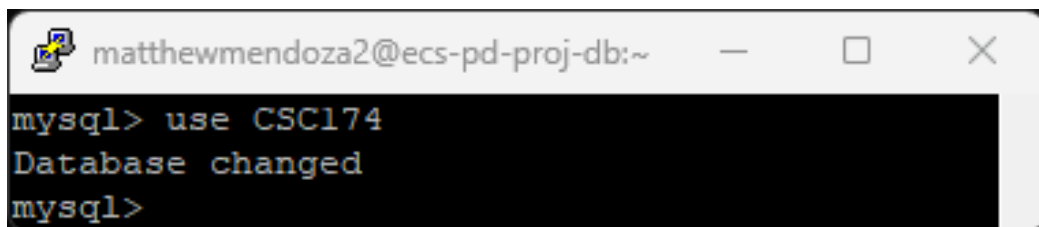
mysql> 
```

Initial Setup – self reference for future assignments

1. VPN, GlobalProtect, to the campus network using your SacLink account.
2. Use SSH to connect to the server. Type “**ecs-pd-proj-db.ecs.csus.edu**” as the host name.
 - a. **If using MacOS:** `ssh saclinkUserName@ ecs-pd-proj-db.ecs.csus.edu`
3. Enter your SacLink user name and password
4. Then type the following command: `mysql -h ecs-pd-proj-db.ecs.csus.edu -u dbUserName -p`
 - a. Use your professor assigned dbUserName; for example,
`mysql -h ecs-pd-proj-db.ecs.csus.edu -u CSC123456 -p`
5. Enter your professor assigned password
 - a. **For example:** `Csc134_123456789`
6. Enter: use [provided dbUserName]
 - a. **For example**

```
mysql> use CSC123456
```

```
Database changed
```



The screenshot shows a terminal window with the title bar "matthewmendoza2@ecs-pd-proj-db:~". The terminal content is as follows:

```
mysql> use CSC174
Database changed
mysql>
```